

Figure 1 All-Optical Switching Node

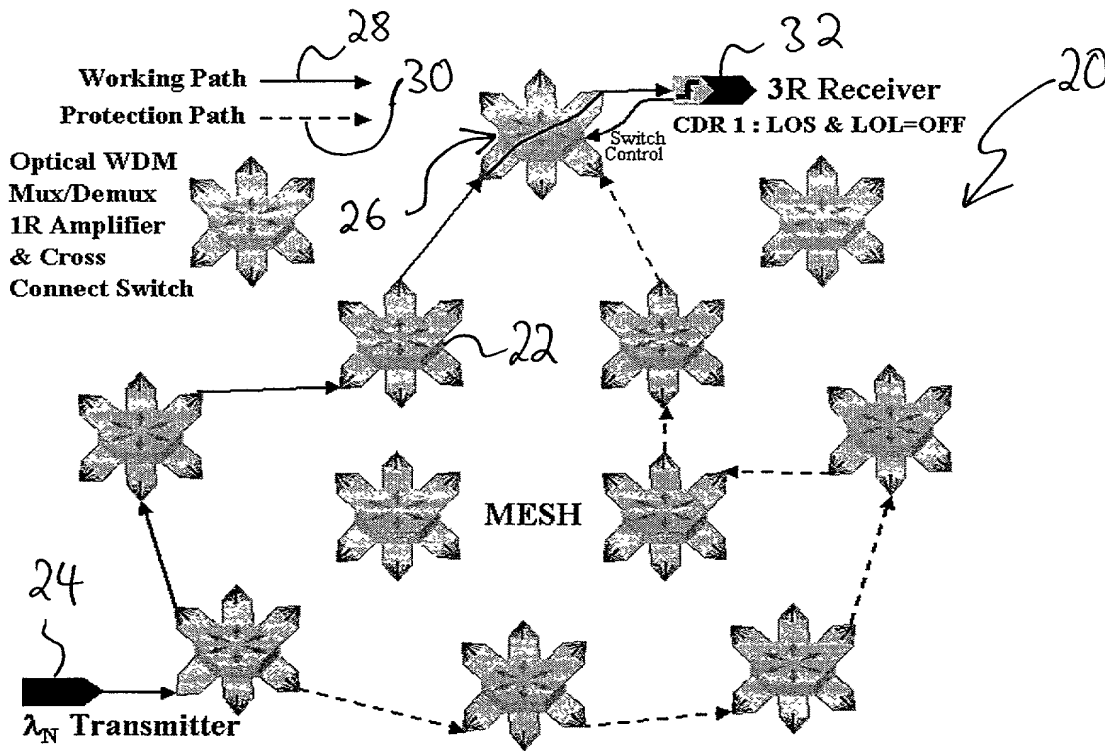


Figure 2 All-Optical Mesh Network – Uni-directional Connections

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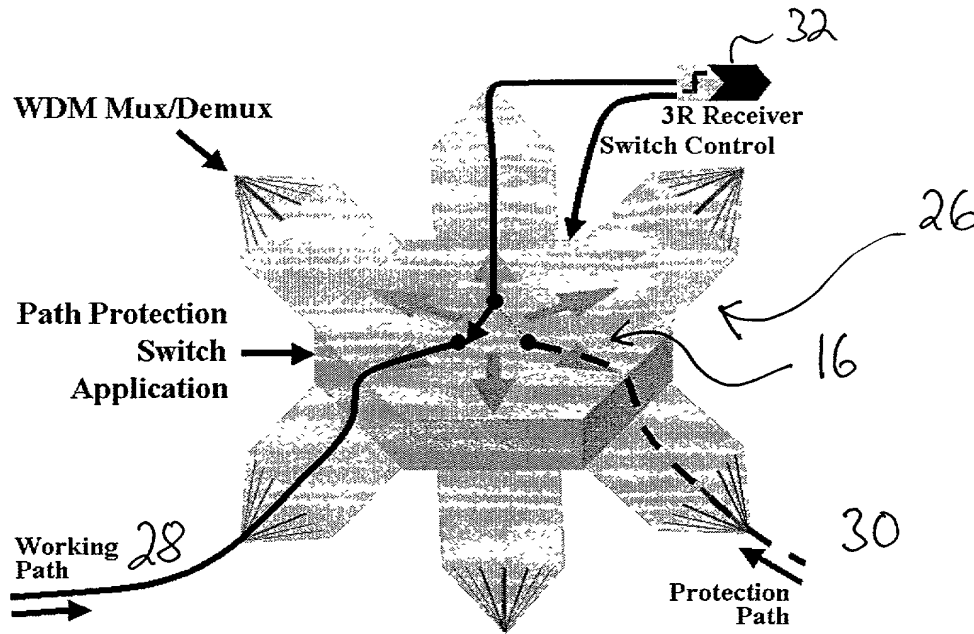


Figure 3 Integrated All-Optical Cross-Connect & Path Protection Switch

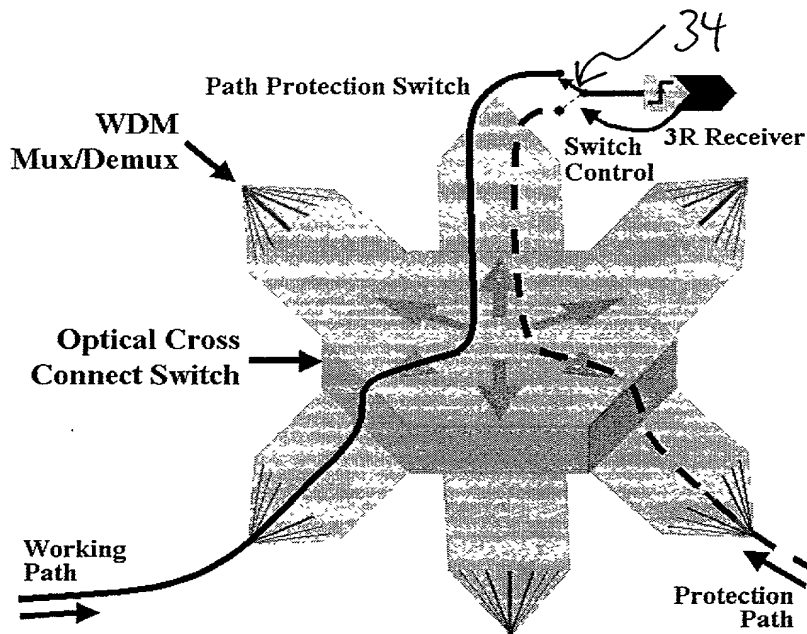


Figure 4 Separate All-Optical Cross Connect & Path Protection Switches

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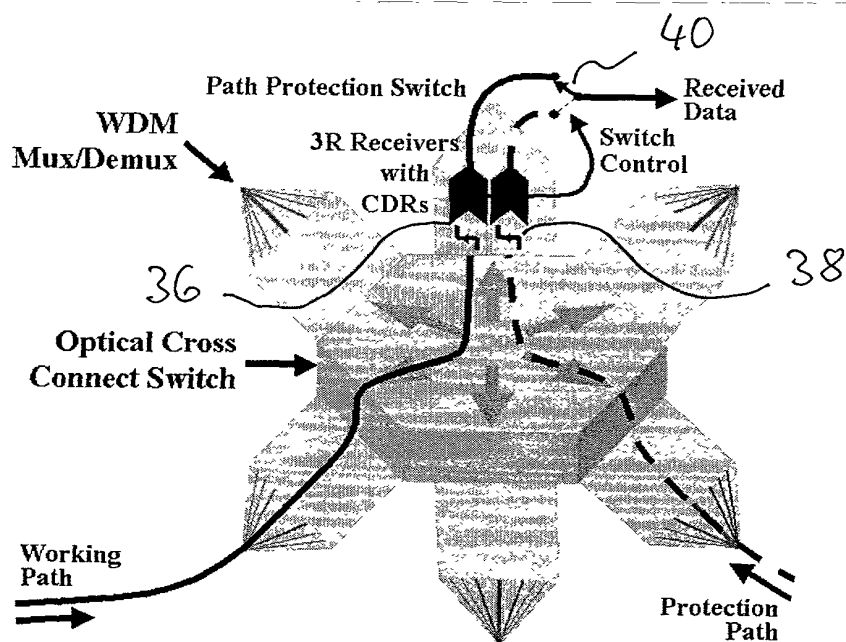


Figure 5 Dual 3R Receivers on Input Side of Electrical Path Protection Switch

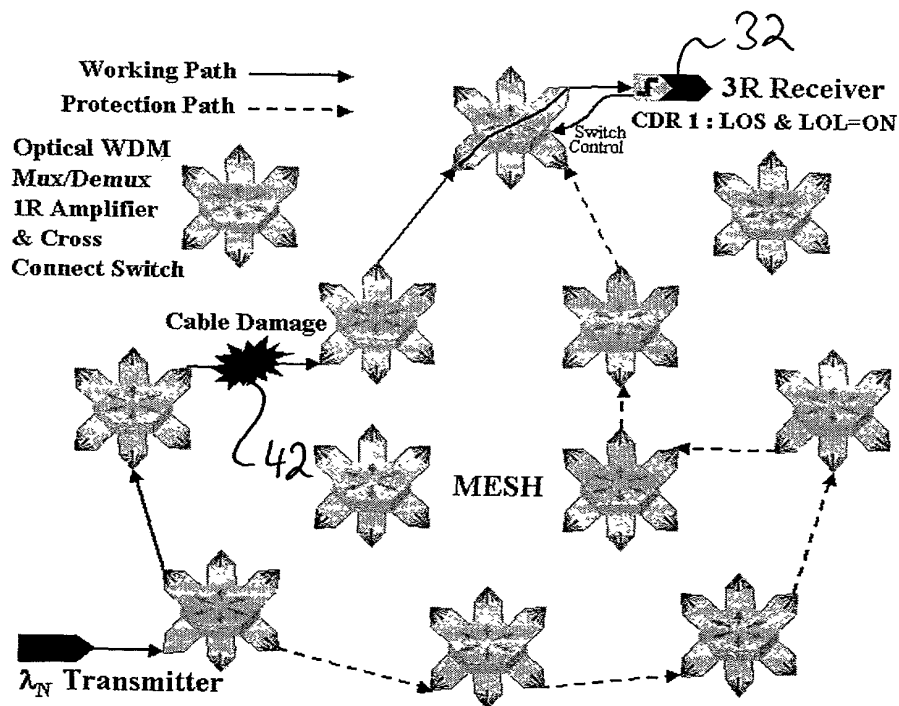


Figure 6 All Optical Mesh Network with Cable Damage

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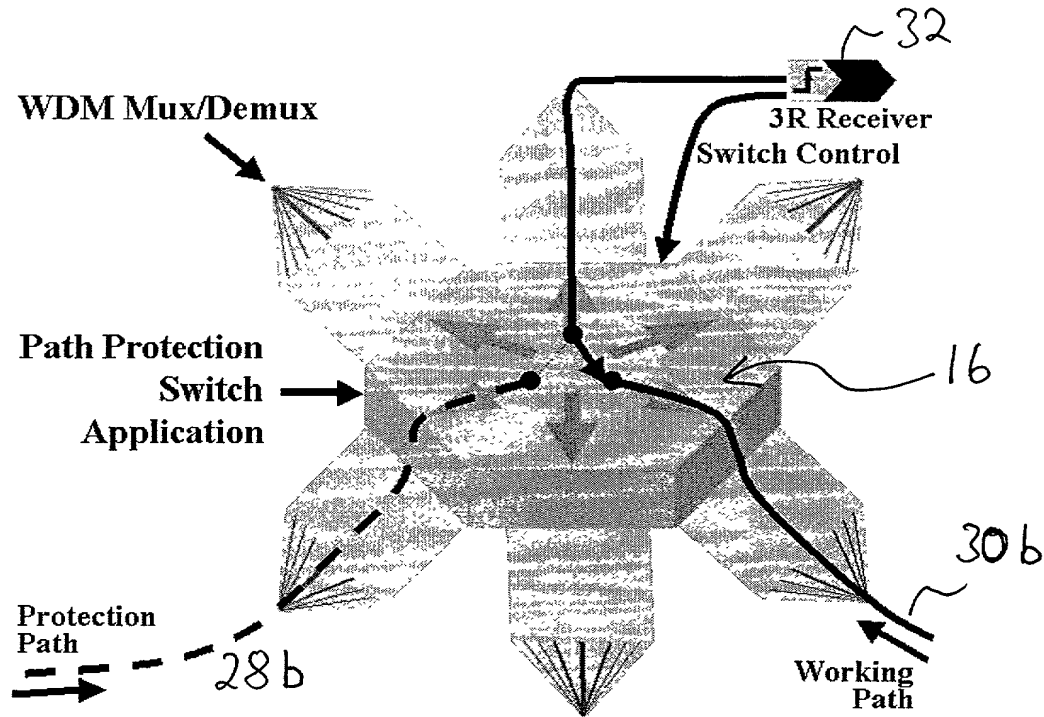


Figure 7 Optical Protection Switch Activated - New Working Path

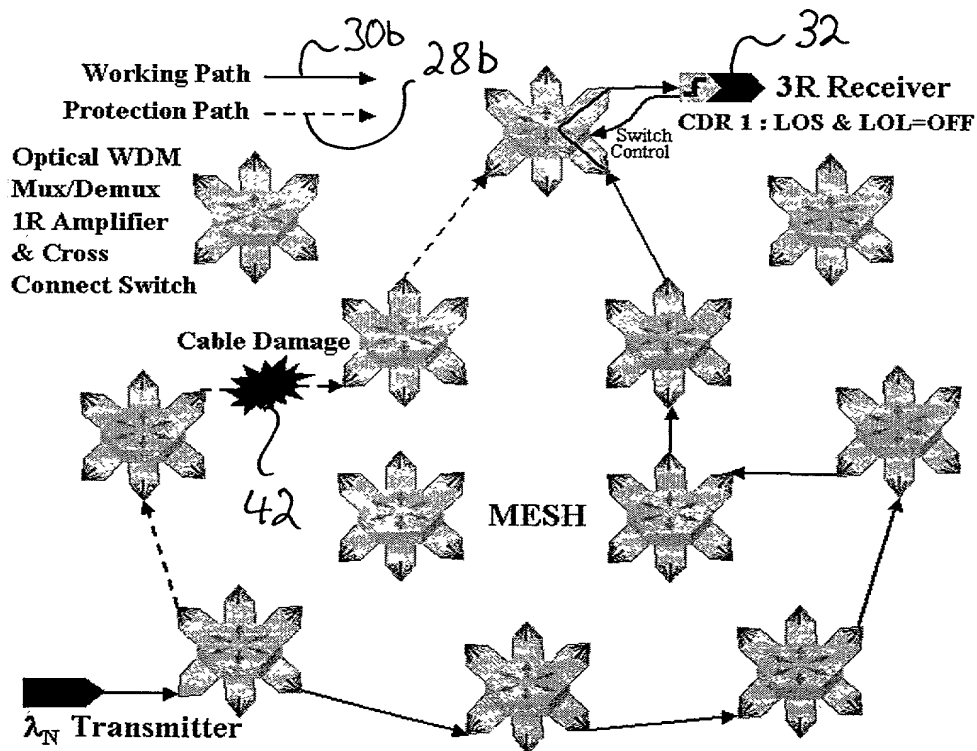


Figure 8 All-Optical Mesh Network - Fault Bypassed with New Working Path

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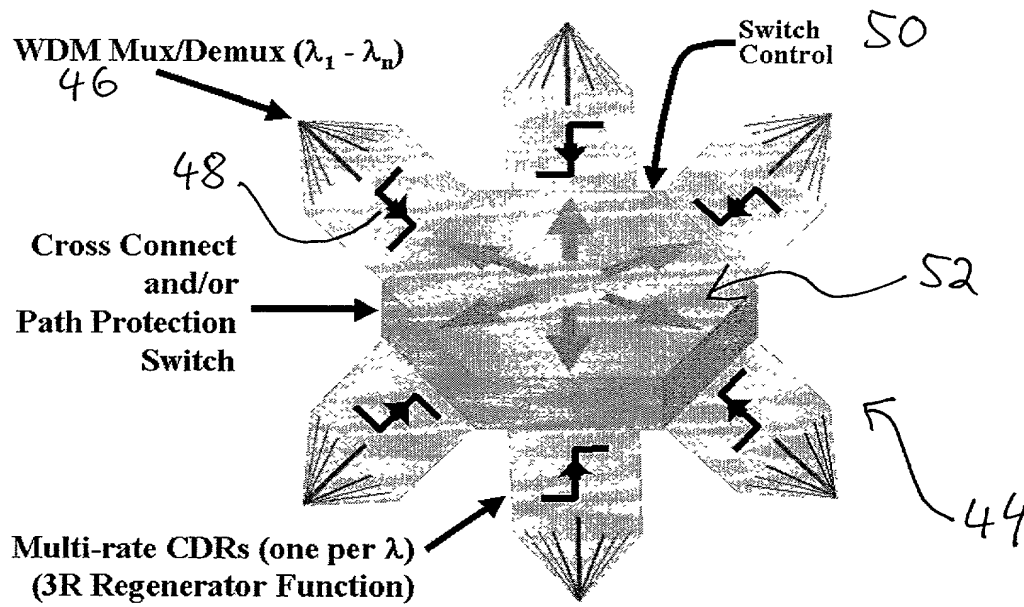


Figure 9 OEO Switching Node

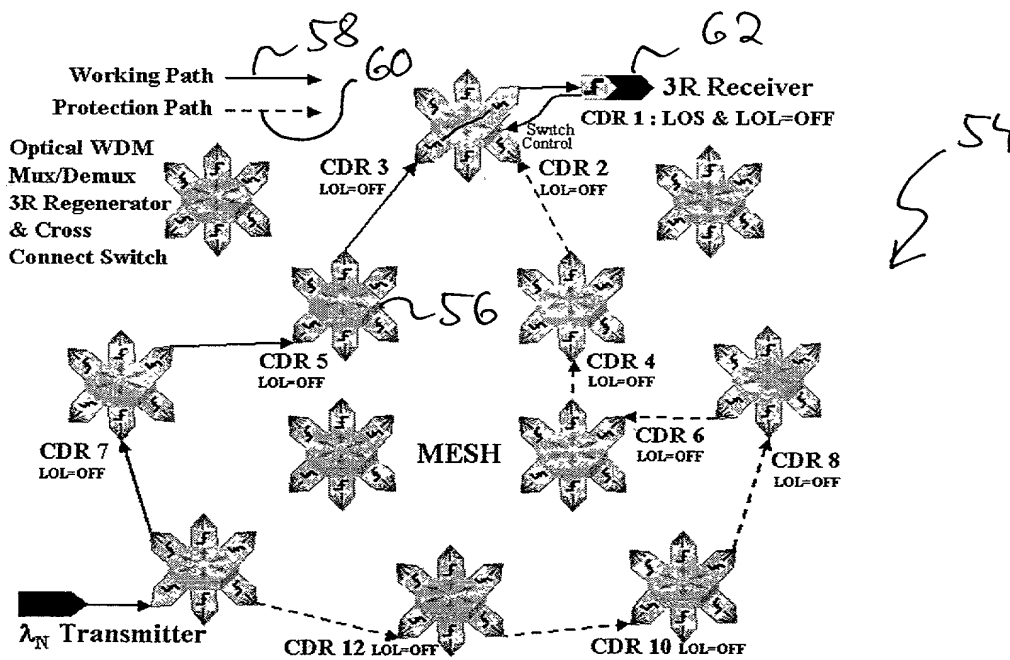


Figure 10 Mesh Network of OEO Switching Nodes

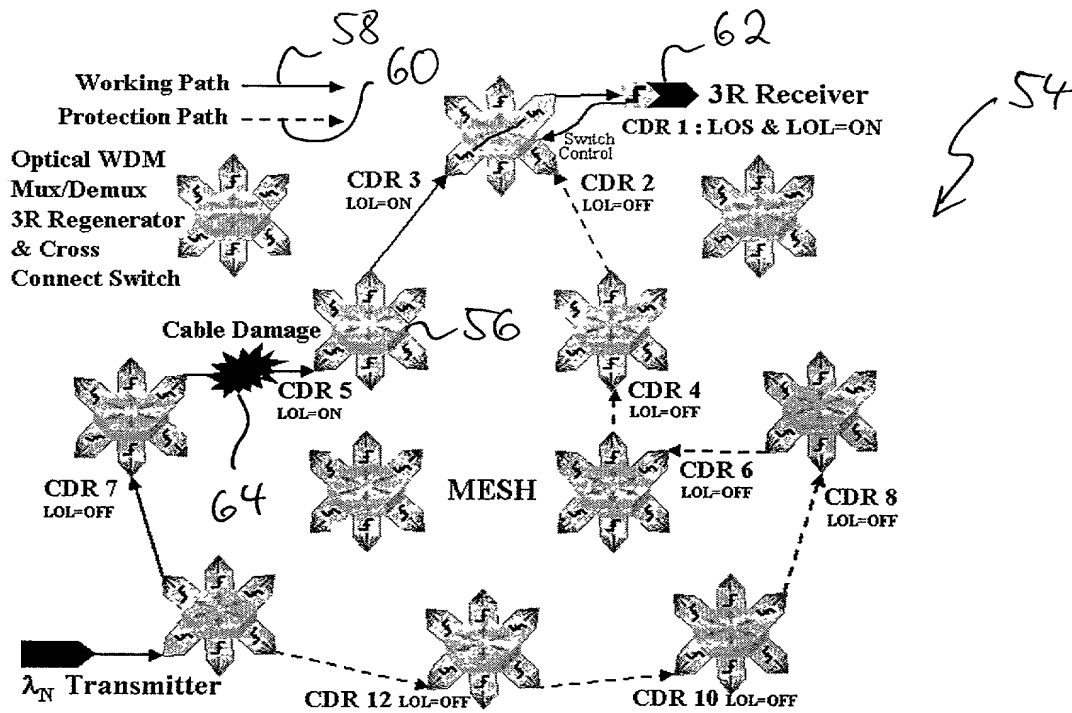


Figure 11 OEO Mesh Network with Cable Damage

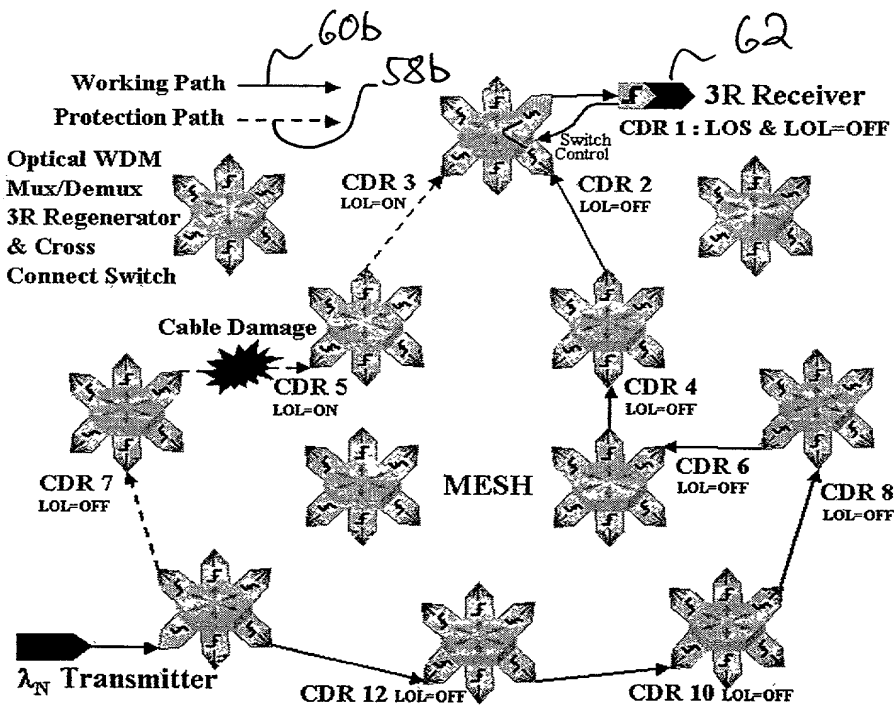


Figure 12 OEO Mesh Network - Fault Bypassed with New Working Path

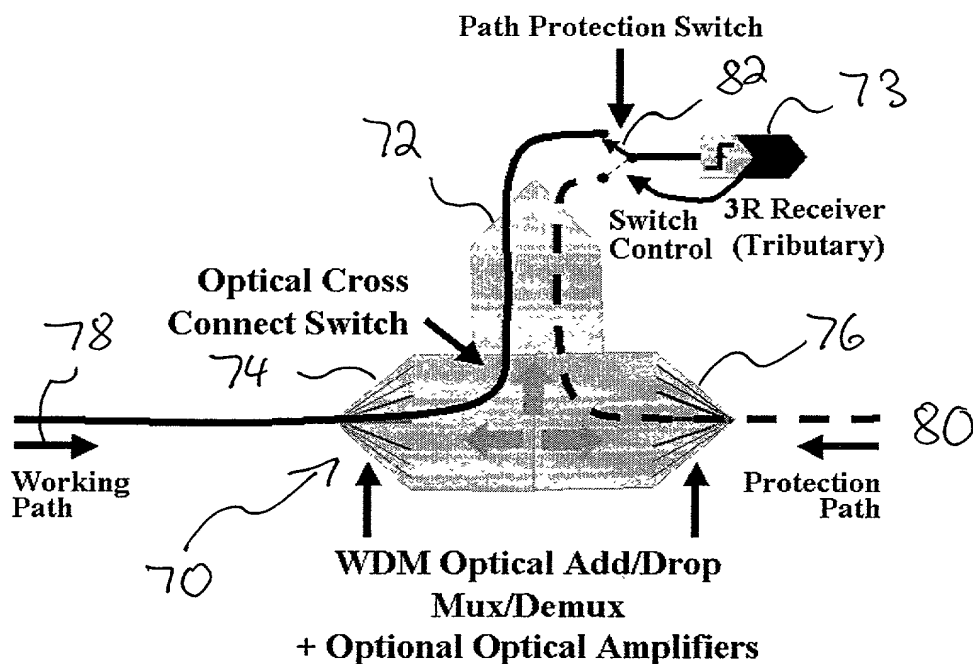


Figure 13 Reconfigurable OADM Node - Path Protection Switch & 3R Receiver

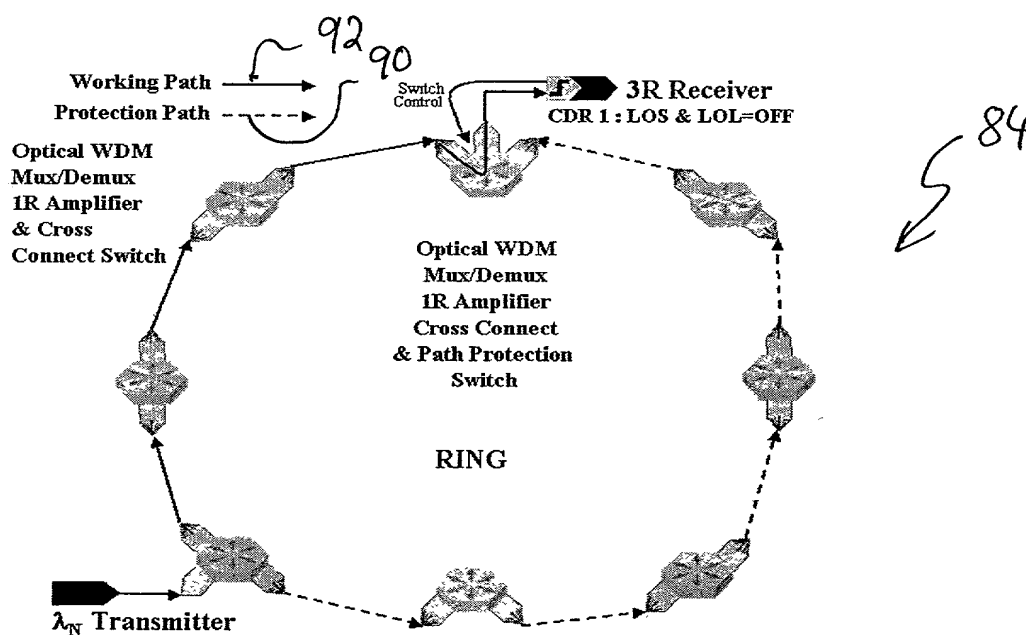


Figure 14 All-Optical Ring Network - Working Path Operational

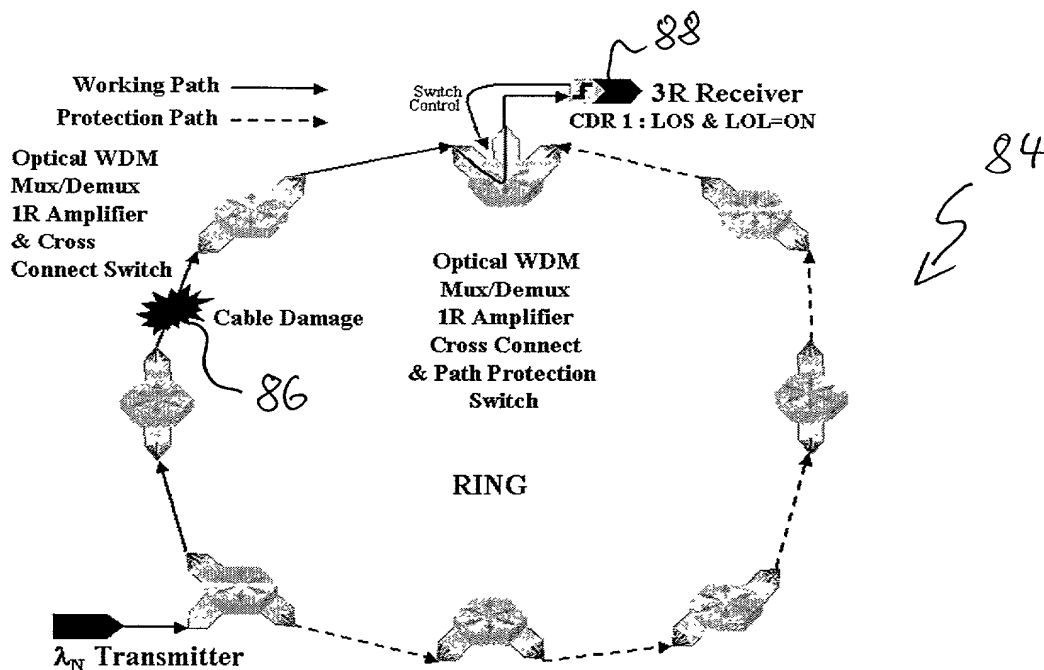


Figure 15 Cable Damage in Working Path of All-Optical Ring Network

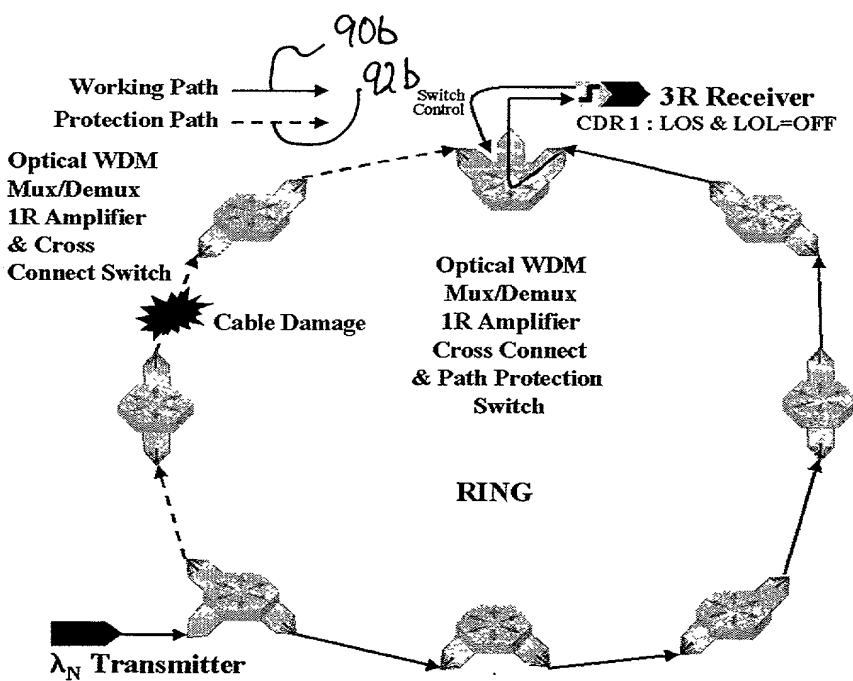


Figure 16 New Working Path - All Optical Ring Network Failure Bypassed

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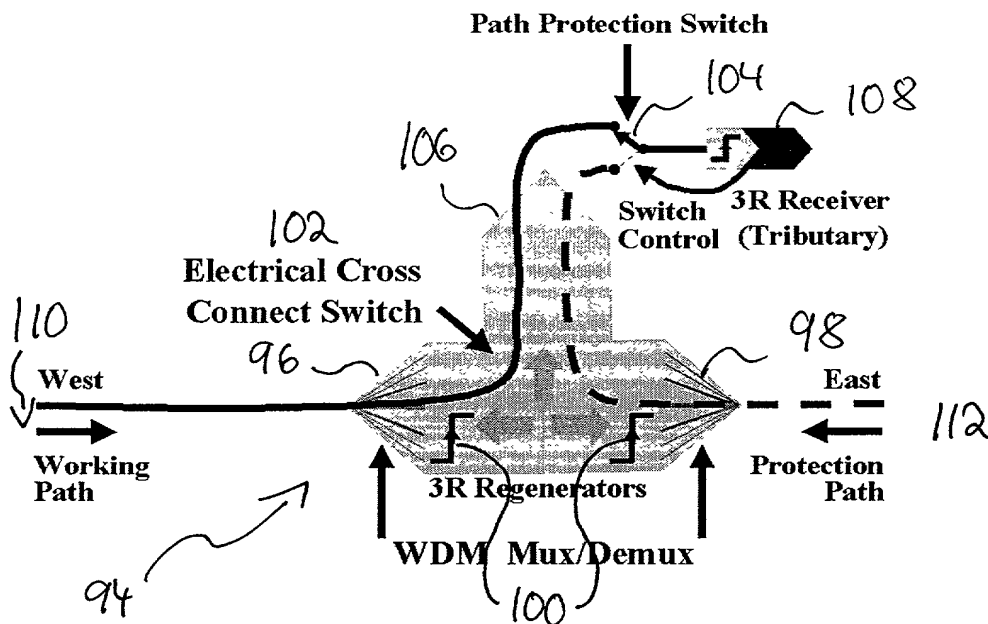


Figure 17 Reconfigurable OEO Add/Drop WDM Node - Path Protection Switch & 3R Receiver

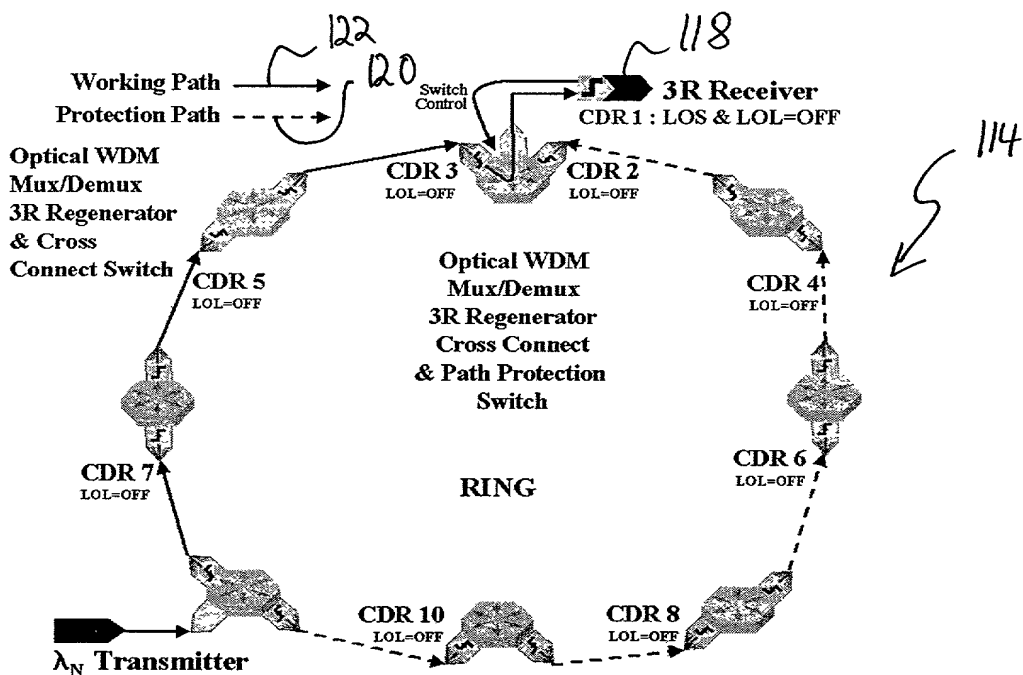


Figure 18 Ring Network of Reconfigurable OEO Nodes - Working Path Operational

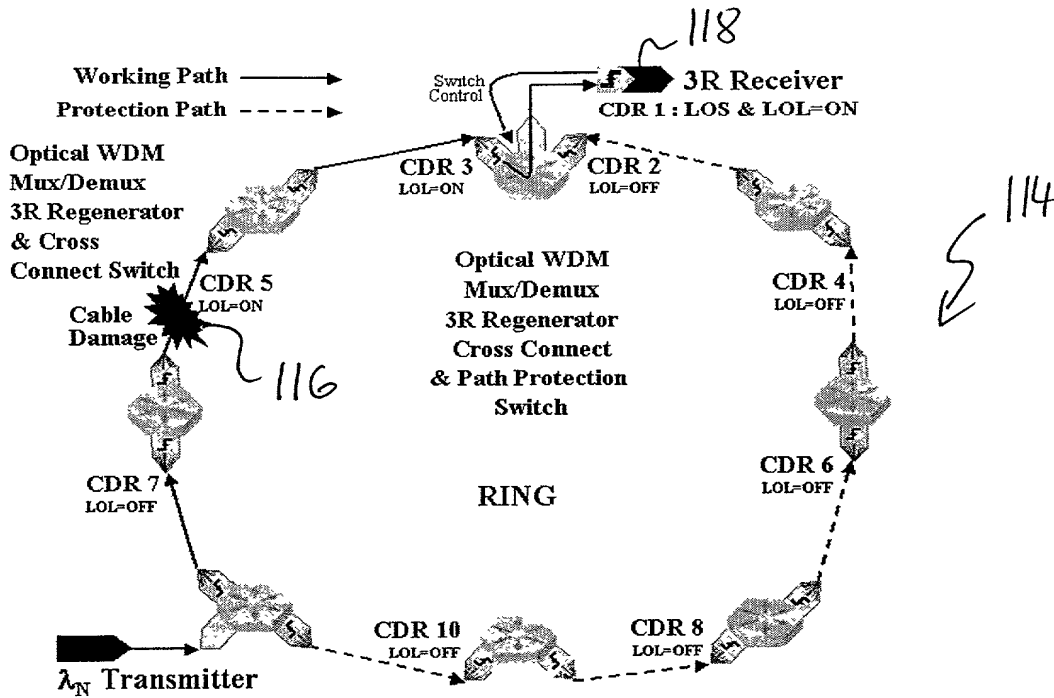


Figure 19 Cable Damage in Working Path of OEO Ring Network

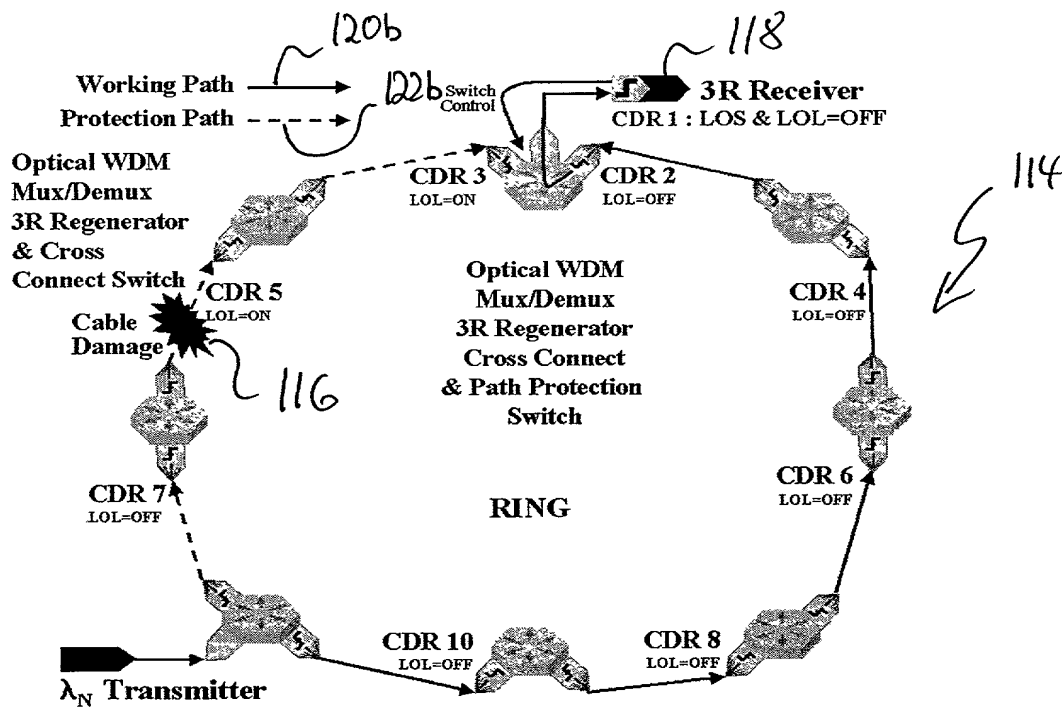


Figure 20 New Working Path - OEO Ring Network Failure Bypassed

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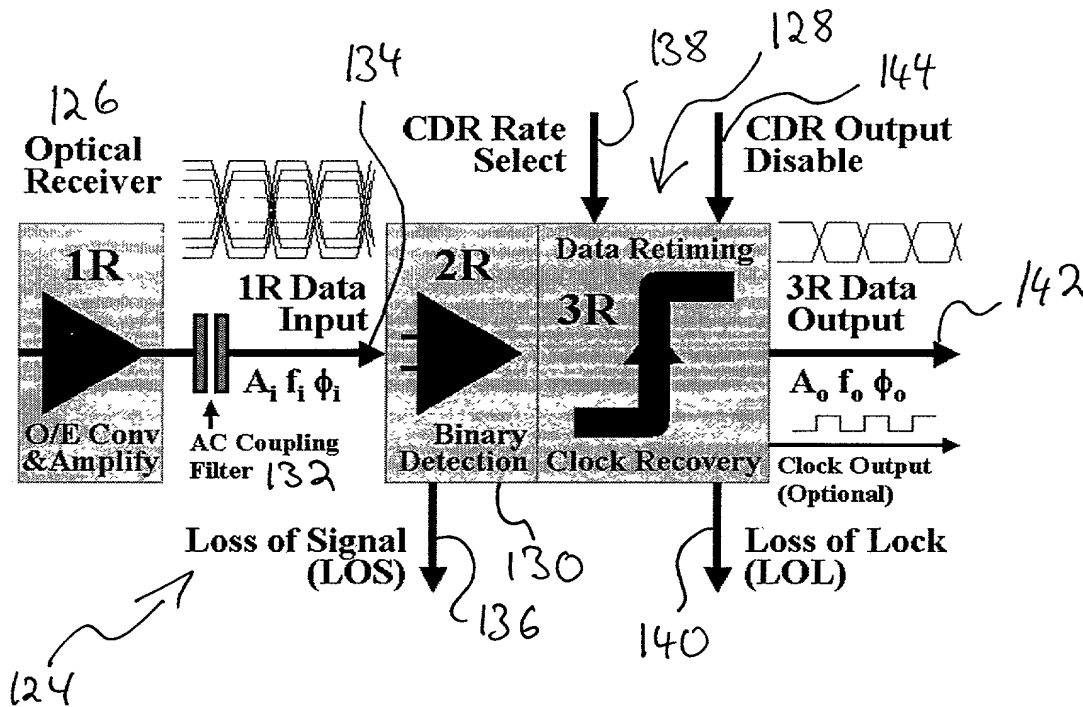


Figure 21 Optical Receiver and Multi-Rate CDR - Showing Inputs & Outputs

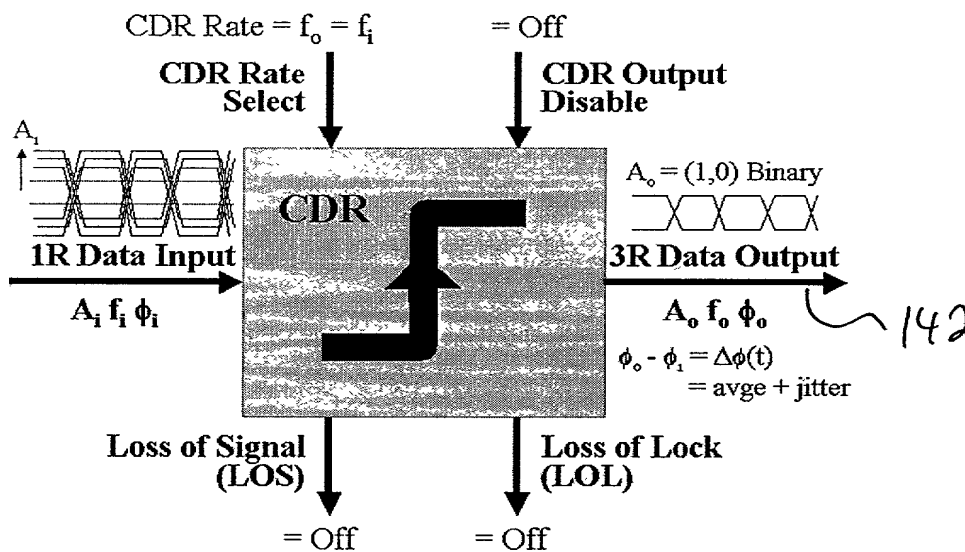


Figure 22 CDR Normal Operating State

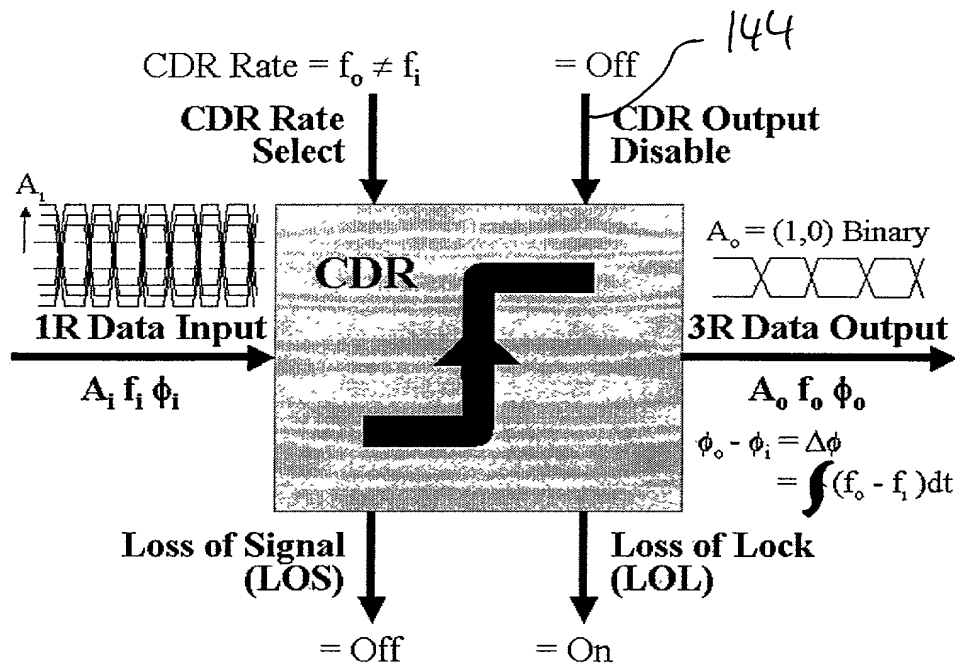


Figure 23 CDR - Signal above Threshold but in Loss of Lock State - Pseudo Data Propagated

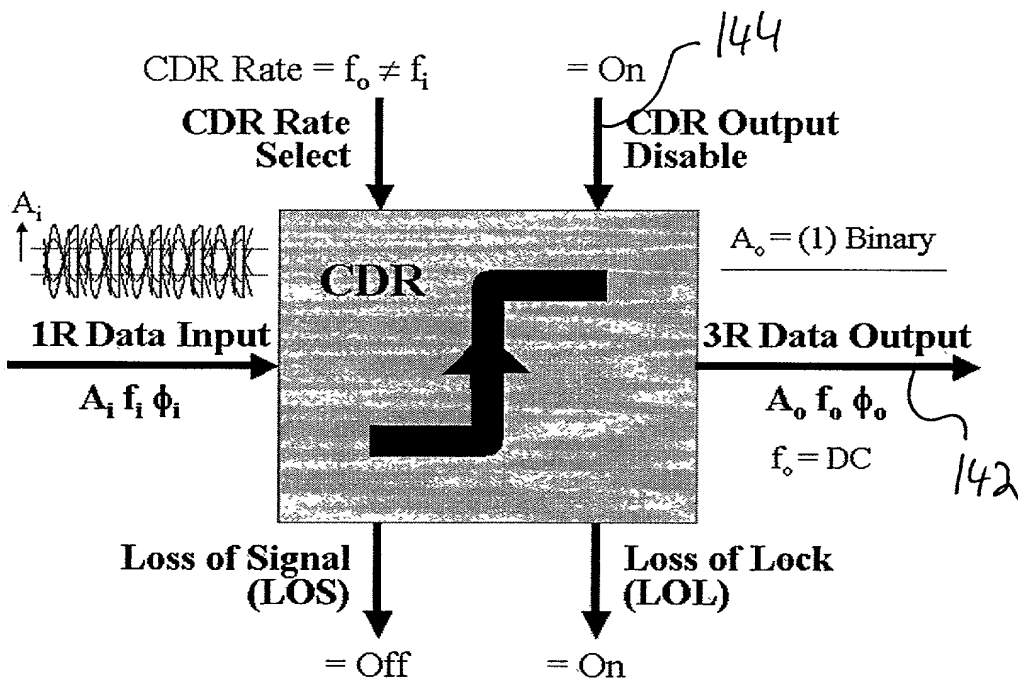


Figure 24 CDR - Signal above Threshold but in Loss of Lock State - Pseudo Data Inhibited

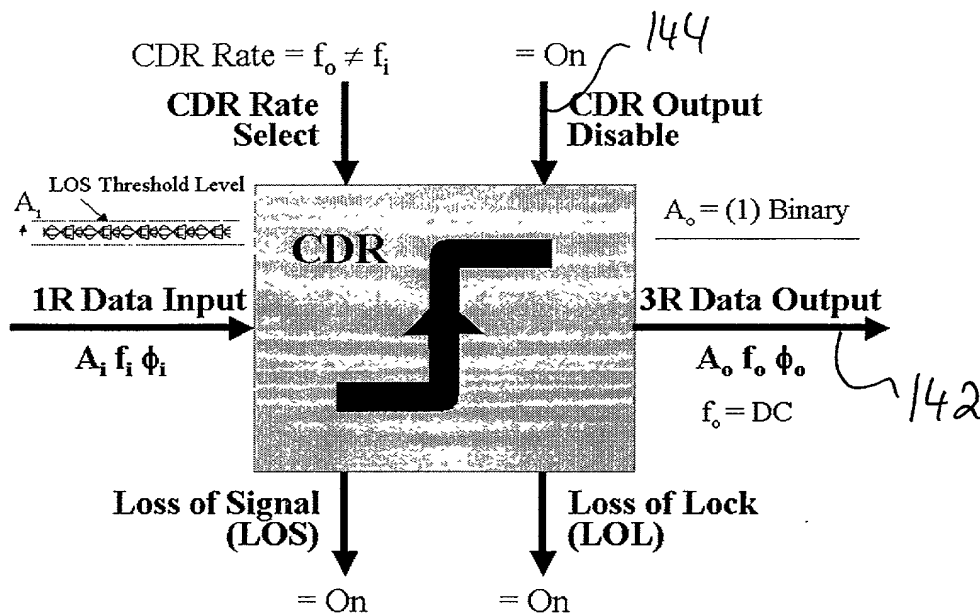


Figure 25 CDR - Signal below Threshold and in Loss of Lock State - Pseudo Data Inhibited

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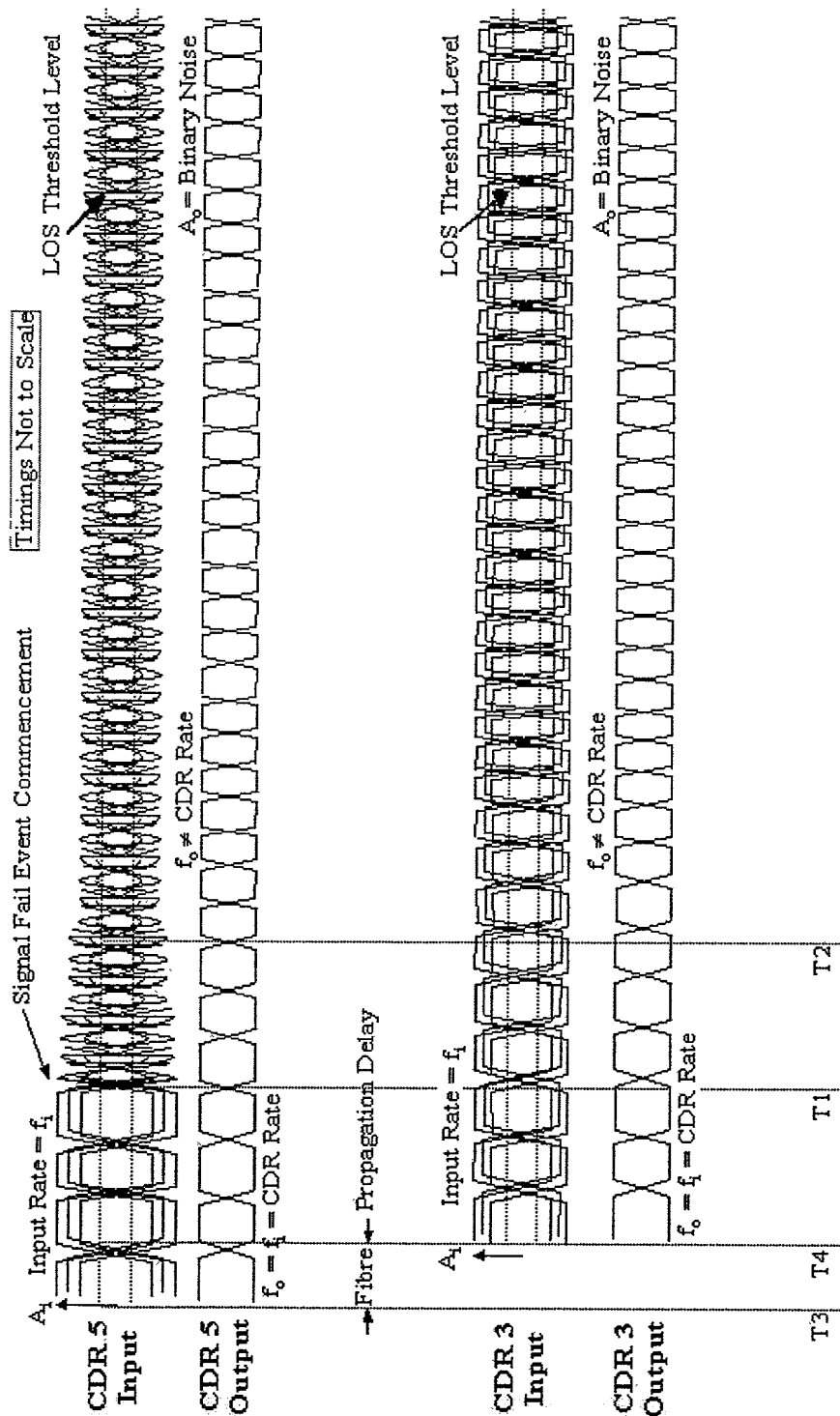


Figure 26 Fault Event with Pseudo Data being forwarded from CDR to CDR

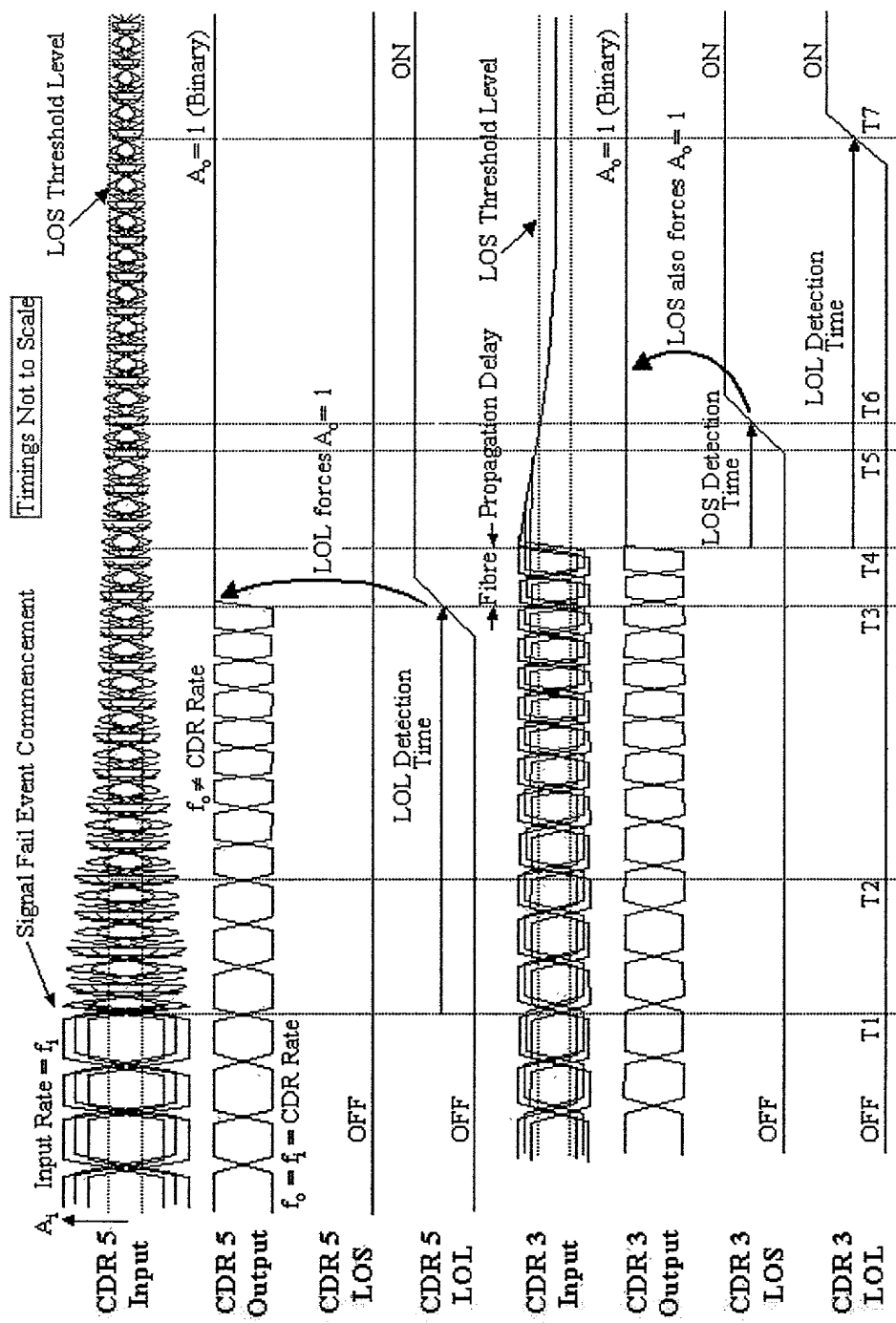


Figure 27 Fault Event with CDR#5 LOL Alarm Disabling CDR#5 Output

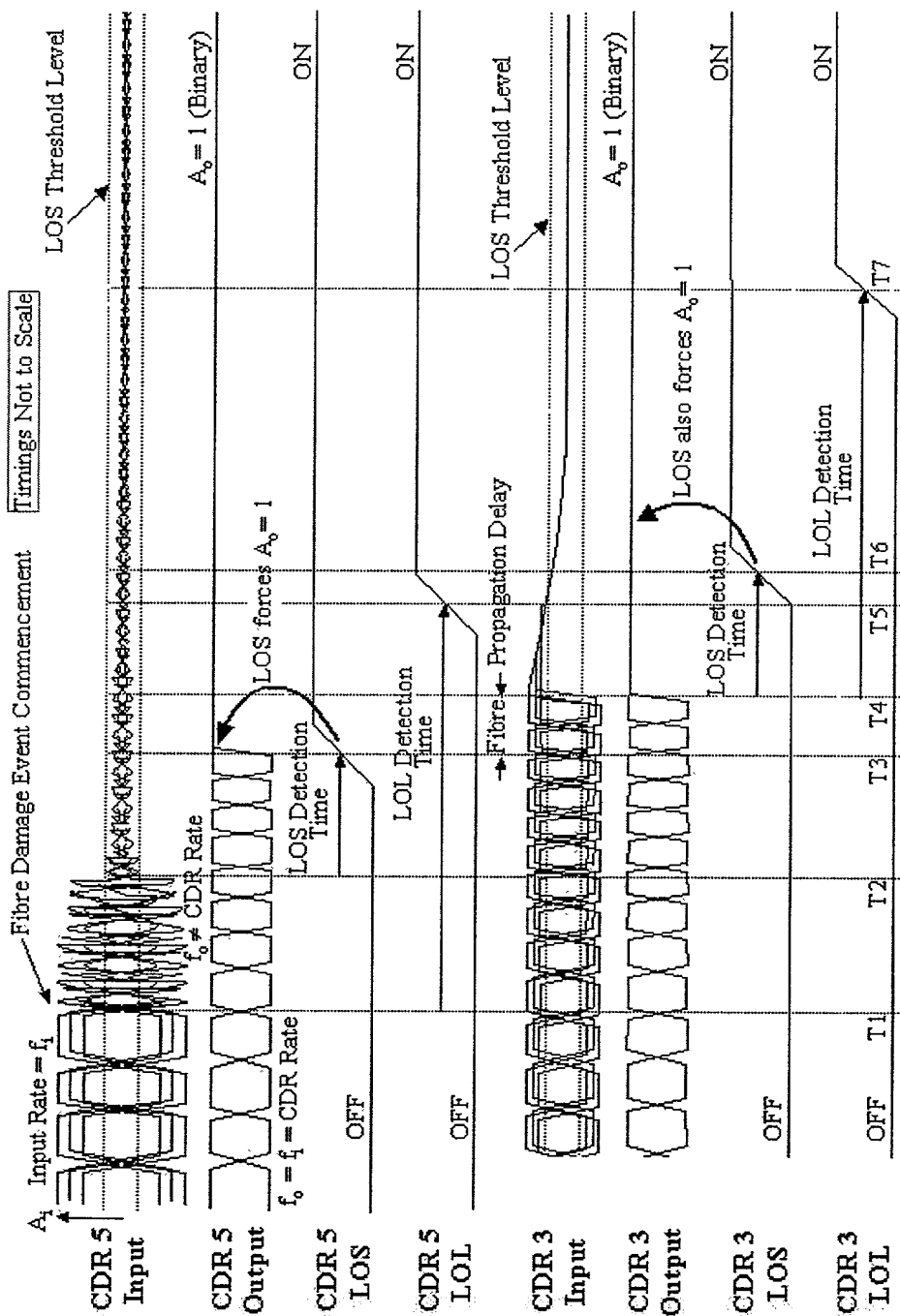


Figure 28 Fault Event with CDR#5 LOS Alarm Disabling CDR#5 Output